<u>IN THE CLAIMS</u>

The following are Claims 1-47.

Claims

1.    (Currently Amended) A system for efficient distribution of data to a client through a distributed computer network, comprising:

a management center connected to the network for determining an <u>electronically best-performing node</u> ~~optimal delivery route to the client~~ and directing the data <u>to the client from the electronically best-performing node</u> ~~along the optimal delivery route~~; and

<u>a plurality of nodes configured to</u>~~at least one node connected to the network for relaying~~ <u>relay</u> the data for delivery to the client;

wherein the management center comprises a mapping engine for mapping trace routes between the management center and <u>each of the plurality of nodes,</u> ~~the at least one node~~ and <u>for mapping</u> trace routes between the management center and the client, <u>and for storing results of the trace routes in a trace cache, wherein the management center analyzes the results of the trace routes</u> ~~and for comparing the trace routes between the management center with the trace routes between the management center and the client~~ in order to determine <u>the</u>

electronically best-performing node from among the plurality

of nodes~~the optimal delivery route~~.


     2.    (Currently Amended) The system of claim 1 wherein

the ~~at least one~~electronically best-performing node buffers

the data before replicating a plurality of the data for

delivery to multiple clients.


     3.    (Currently Amended) The system of claim 1 wherein

the ~~at least one~~electronically best-performing node buffers

the data before replication.


     4.    (Original) The system of claim 1 further comprising

at least one content provider, the content provider providing

at least one stream of data to the network.


     5.    (Original) The system of claim 1 further comprising

at least one zone master for assisting the management center

with managing downstream nodes.


     6.    (Cancelled)


     7.    (Currently Amended) The system of claim 1 ~~where~~

~~in~~wherein the management center further comprises a content

manager for managing registration of content provider details.

8. (Currently Amended) The system of claim 1 wherein the management center further comprises a node controller for monitoring and informing the ~~at least one node~~plurality of nodes.

9. (Original) The system of claim 1 wherein the management center further comprises a log management controller for compiling and processing log statistics received from the at least one node.

10. (Original) The system of claim 1 wherein the management center further comprises an interface engine for allowing access to management center databases.

11. (Original) The system of claim 1 wherein the data is distributed via channels.

12. (Original) The system of claim 11 wherein the data is time-staggered versions of identical content to achieve virtual fast-forward and rewind.

13. (Original) The system of claim 11 wherein clients are delivered local content at predetermined or incident-invoked times for a predetermined duration.

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14. (Original) The system of claim 1 wherein the data is packet switched telephony data.

15. (Original) The system of claim 1 wherein the data is video conferencing data.

16. (Original) The system of claim 1 wherein the data is live media content.

17. (Original) The system of claim 1 wherein the data is general Internet data.

18. (Original) The system of claim 1 wherein the data is on-demand content.

19-21. (Cancelled).

22. (Currently Amended) A method for distribution of data to a client through a computer network, comprising the steps of:

determining an optimal delivery route from a content provider to a client, wherein determining the optimal delivery route comprises mapping trace routes between a management center and a plurality of nodes and between the management

center and the client and comparing the trace routes between the management center and the plurality of nodes to the trace routes between the management center and the client to determine an optimal node;

transmitting a data stream from the content provider through the network;

receiving the data at the optimal node to the client; and

relaying the data for delivery to the client.

23. (Original) The method of claim 22 further comprising the step of transmitting the data through a path of a plurality of nodes before reaching the optimal node.

24. (Previously Presented) The method of claim 22 wherein the management center determines the path.

25. (Original) The method of claim 22 further comprising the step of substituting content local to the optimal node into the data stream.

26 and 27. (Cancelled).

28. (Previously Presented) A method for determining an optimal delivery route from a content provider to a client within a network, comprising the steps of:

obtaining a trace route from a management center to the client;

comparing results of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the client; and

selecting a most efficient network link as the optimal delivery route.

29.    (Original) The method of claim 28 wherein the step of selecting further comprises performing trace route mappings between the node of the most efficient network link and the client to determine the optimal delivery route.

30.    (Original) The method of claim 28 wherein the step of determining further comprises performing trace route mappings between the management center and the nodes.

31.    (Original) The method of claim 28 wherein the step of determining further comprises accessing a database in the management center containing trace route data for the nodes.

32. (Original) The method of claim 28 wherein the step of determining further comprises accessing a location compiled table for node location data within a zone.

33. (Original) The method of claim 28 wherein the step of determining further comprises accessing a best performing node index unique router address table.

34 and 35. (Cancelled).

36. (Previously Presented) A computer readable medium having embodied thereon a program, the program being executable by a machine to perform the method step for determining an optimal delivery route from a content provider to a client within a network, the method steps comprising:

obtaining a trace route from a management center to the client;

comparing results of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the client; and

selecting the most efficient network link as the optimal delivery route.

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37. (Original) The computer readable medium of claim 36 wherein the step of selecting further comprises performing trace route mappings between the nodes of the  most efficient network links and the client to determine the optimal delivery route.

38. (Previously Presented) A method for determining an optimal delivery route from a first computing device to a second computing device within a network, comprising the steps of:

obtaining a trace route from a management center to the first and second computing devices;

comparing results of the trace route from the management center to the first and second computing devices to results of a plurality of trace routes from the management center to a plurality of nodes within the network to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the first and second computing devices; and

performing trace route mappings between nodes of the most efficient network links and the first and second computing devices.

39 - 45.   (Canceled)

46.   (Original) The system of claim 1 wherein the management center downgrades lower priority clients from a higher quality of service network link to a less optimal network link when a higher priority client requests use of the higher quality of service network link.

47.   (Original) The system of claim 1 wherein the at least one node is used to buffer and resynchronize multiple streams of content.

48.  (New) The system of claim 1, wherein each of the plurality of nodes is configured to buffer a stream of the data and relay the data to the client.

49.  (New) The system of claim 1, wherein each of the plurality of nodes comprises a computer readable medium having embodied thereon a program, the program being executable by a machine to relay streaming media to clients responsive to signals from the management center.

50.  (New) An Intelligent Distribution Network (IDN) management center, comprising:

a node database of a plurality of IDN nodes of the IDN, the plurality of IDN nodes are located at divergent data locations on the network and are configured to provide requested content to clients;

a network trace cache for storing results of trace routes to the plurality of IDN nodes and to the clients;

a machine readable medium having embodied thereon a program, the program being executable by a machine to cause the management center to perform the following actions:

receive a request for content from a client on the network;

analyze the results of the trace routes to determine an electronically best-performing IDN node for streaming the requested content to the client from among the plurality of IDN nodes; and

direct the client to access the requested content from the best performing IDN node.

51. (New) The management center of claim 50, wherein the program further causes the management center to control communications between the electronically best performing IDN node and the media source to provide the requested content to the electronically best performing IDN node for streaming to the client.

52. (New) The management center of claim 50, wherein the trace routes include trace routes between the management center and each of the plurality of nodes and trace routes between the management center and the client.

53. (New) The management center of claim 50, wherein the program further causes the management center to send instructions to the plurality of nodes to cause the plurality of nodes conduct trace routes between the plurality of nodes and the client, and wherein the results of trace routes between the plurality of nodes and the client are stored in the trace cache.

54. (New) The management center of claim 50, wherein analyzing the trace route results comprises client location identification, node-client relationship analysis and node-node relay delegations.

55. (New) The management center of claim 50, wherein analyzing the trace route results comprises evaluating whether existing information exists in the trace cache concerning which of the plurality of nodes is best situated to serve the content to the client and if the information does not exist or is outdated, initiating further trace routes to the client to obtain updated results for analysis and analyzing the updated results.

56. (New) An intelligent distribution network (IDN) system comprising:

an IDN management center comprising a mapping engine for performing trace routes and a network trace cache for storing results of trace routes; and

a plurality of IDN nodes, each of the IDN nodes being configured to provide requested media content to clients;

wherein the management center, responsive to a request for content from a requesting client, analyzes the results of the trace routes to determine an electronically best-performing IDN node for streaming the requested content to the requesting client from among the plurality of IDN nodes, and directs the client to access the requested content from the best performing IDN node.

57. (New) The intelligent distribution network (IDN) system of claim 56, wherein the trace routes include trace routes between the management center and each of the plurality of nodes and trace routes between the management center and the client.

58. (New) The intelligent distribution network (IDN) system of claim 56, wherein each of the plurality of IDN nodes comprises stored IDN instructions for conducting trace routes

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between each respective one of the plurality of IDN nodes and the client, and wherein the results of trace routes between the plurality of nodes and the client are stored in the trace cache of the management center.

59. (New) The intelligent distribution network (IDN) system of claim 56, wherein analyzing the trace route results comprises client location identification, node-client relationship analysis and node-node relay delegations.

60. (New) The intelligent distribution network (IDN) system of claim 56, wherein analyzing the trace route results comprises evaluating whether existing information exists in the trace cache concerning which of the plurality of nodes is best situated to serve the content to the client and if the information does not exist or is outdated, initiating further trace routes to the client to obtain updated results for analysis and analyzing the updated results.

61. (New) The intelligent distribution network (IDN) system of claim 56, wherein the system comprises a plurality of management centers, wherein at least one of the management centers comprises a zone management center for performing best-performing node analysis within a respective zones of the IDN network, wherein the zone comprises at least one IDN node serving a geographical or market demographic region or location.

62. (New) A method of providing streaming services to clients over an intelligent distribution network (IDN), comprising:

receiving a request for content from a client;

performing trace routes to a plurality of IDN nodes and to the client;

storing results of the trace routes in a trace cache;

analyzing the results of the trace routes to determine an electronically best-performing IDN node from among the plurality of IDN nodes for streaming the requested content to the client from among the plurality of IDN nodes; and

directing the client to access the requested content from the best performing IDN node.